



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/825,423 Confirmation No. 2057
Applicant : Patricia C. Weber *et al.*
Filed : April 3, 2001
TC/A.U. : 1652
Examiner : Lindsay T. Odell
Docket No. : ID01152
Customer No. : 24265

December 14, 2005

Mailstop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants respectfully request that the documents listed on the accompanying form PTO-1449 be considered and made of record in the above-identified application. Copies of the documents listed have already been provided along with the previous submission dated August 31, 2001. Applicant's submission of this Information Disclosure Statement is not an admission that any reference cited herein qualifies as prior art.

Respectfully submitted,

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| | | | |
|---|--|---|---------------------------|
| FORM PTO-1449 | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | ATTY. DOCKET NO.: ID01152 | SERIAL NO.: 09/825,423 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) | | APPLICANT: Patricia C. Weber, et al. | |
| | | FILING DATE: April 3, 2001 | GROUP: 1652 |

U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB- CLASS | FILING DATE IF APPROPRIATE |
|----------------------|--------------------|----------|--------------|-------|---------------|-------------------------------|
| AA | 5,989,827 | 11/23/99 | Fesik et al. | | | |
| AB | | | | | | |
| AC | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT | DATE | COUNTRY | CLASS | SUB- | TRANSLATION |
|----|----------|------|---------|-------|------|-------------|
| AD | | | | | | |
| AE | | | | | | |
| AF | | | | | | |

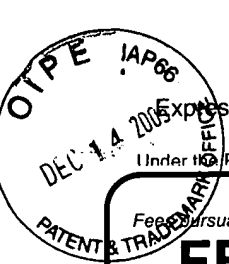
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|----|---|
| AG | Cho <i>et al.</i> , "Crystal structure of RNA helicase from genotype 1b hepatitis C virus. A feasible mechanism of unwinding duplex RNA." <i>J Biol Chem.</i> 1998 Jun 12; 273 (24):15045-52. |
| AH | de la Cruz <i>et al.</i> , "Unwinding RNA in <i>Saccharomyces cerevisiae</i> : DEAD-box proteins and related families", <i>Trends Biochem Sci.</i> 1999 May; 24 (5):192-8. Review. |
| AI | <i>Fields Virology</i> , 3 rd Ed. (B.N. Fields <i>et al.</i> , eds., Raven, New York, 1996) p. 615. |
| AJ | Gorbalenya <i>et al.</i> , "A novel superfamily of nucleoside triphosphate-binding motif containing proteins which are probably involved in duplex unwinding in DNA and RNA replication and recombination." <i>FEBS Lett.</i> 1988 Aug 1; 235 (1-2):16-24. Review. |
| AK | Gorbalenya and Koonin, "Helicases: amino acid sequence comparisons and structure-function relationships", <i>Current Opinion in Structural Biology</i> , 1993 3 :419-429. |
| AL | Grakoui <i>et al.</i> , "Expression and identification of hepatitis C virus polyprotein cleavage products", <i>J Virol.</i> 1993 Mar; 67 (3):1385-95. |
| AM | Howe <i>et al.</i> , "A novel recombinant single-chain hepatitis C virus NS3-NS4A protein with improved helicase activity", <i>Protein Sci.</i> 1999 Jun; 8 (6):1332-41. |
| AN | Jankowsky <i>et al.</i> , "The DEXH protein NPH-II is a processive and directional motor for unwinding RNA", <i>Nature.</i> 2000 Jan 27; 403 (6768):447-51. |
| AO | Kadaré and Haenni, "Virus-encoded RNA helicases" <i>J Virol.</i> 1997 Apr; 71 (4):2583-90. Review. No abstract available. |
| AP | Kim <i>et al.</i> , "Hepatitis C virus NS3 RNA helicase domain with a bound oligonucleotide: the crystal structure provides insights into the mode of unwinding", <i>Structure</i> 6 (1):89-100 (1998) |
| AQ | Kim <i>et al.</i> , "Towards defining a minimal functional domain for NTPase and RNA helicase activities of the hepatitis C virus NS3 protein", <i>Virus Res.</i> 1997 May; 49 (1):17-25. |
| AR | Koonin and Dolja, "Evolution and taxonomy of positive-strand RNA viruses: implications of comparative analysis of amino acid sequences", <i>Crit Rev Biochem Mol Biol.</i> 1993; 28 (5):375-430. Review. Erratum in: <i>Crit Rev Biochem Mol Biol</i> 1993; 28 (6):546. |
| AS | Korolev <i>et al.</i> , "Comparisons between the structures of HCV and Rep helicases reveal structural similarities between SF1 and SF2 super-families of helicases", <i>Protein Sci.</i> 1998 Mar; 7 (3):605-10. |
| AT | Lohmann <i>et al.</i> , "Processing pathways of the hepatitis C virus proteins", <i>J Hepatol.</i> 1996; 24 (2 Suppl):11-9. Review. |
| AU | Pause and Sonenberg, "Helicases and RNA unwinding in translation", <i>Curr Opin in Struct Biol</i> 3 :953-959 (1993). |
| AV | Shuker <i>et al.</i> , "Discovering high-affinity ligands for proteins: SAR by NMR", <i>Science.</i> 1996 Nov 29; 274 (5292):1531-4. |
| AW | Suzich <i>et al.</i> , "Hepatitis C virus NS3 protein polynucleotide-stimulated nucleoside triphosphatase and comparison with the related pestivirus and flavivirus enzymes.", <i>J Virol.</i> 1993 Oct; 67 (10):6152-8. |
| AX | Yao <i>et al.</i> , "Structure of the hepatitis C virus RNA helicase domain", <i>Nat Struct Biol.</i> 1997 Jun; 4 (6):463-7. |

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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PTO/SB/17 (12-04)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.
Fee pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL

For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

Complete if Known

| | |
|----------------------|--------------------|
| Application Number | 09/825423 |
| Filing Date | 04/03/2001 |
| First Named Inventor | WEBER, Patricia C. |
| Examiner Name | Odell, Lindsay |
| Art Unit | 1652 |
| Attorney Docket No. | ID01152 |

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 19-0365 Deposit Account Name: Schering-Plough Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

| Fee Description | Fee (\$) | Small Entity Fee (\$) |
|---|----------|-----------------------|
| Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent | 50 | 25 |
| Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

| | | | | | | |
|---|---------------------|-----------------|----------------------|----------------------------------|-----------------|----------------------|
| <u>Total Claims</u> | <u>Extra Claims</u> | <u>Fee (\$)</u> | <u>Fee Paid (\$)</u> | <u>Multiple Dependent Claims</u> | <u>Fee (\$)</u> | <u>Fee Paid (\$)</u> |
| - 20 or HP = _____ | x _____ | = _____ | | | | |
| HP = highest number of total claims paid for, if greater than 20 | | | | | | |
| <u>Indep. Claims</u> | <u>Extra Claims</u> | <u>Fee (\$)</u> | <u>Fee Paid (\$)</u> | | | |
| - 3 or HP = _____ | x _____ | = _____ | | | | |
| HP = highest number of independent claims paid for, if greater than 3 | | | | | | |

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| | | | | |
|---------------------|---------------------|---|-----------------|----------------------|
| <u>Total Sheets</u> | <u>Extra Sheets</u> | <u>Number of each additional 50 or fraction thereof</u> | <u>Fee (\$)</u> | <u>Fee Paid (\$)</u> |
| - 100 = _____ | / 50 = _____ | (round up to a whole number) x _____ | = _____ | |

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: IDS fee 180.00

SUBMITTED BY

| | | | |
|-------------------|---------------|--|------------------------|
| Signature | | Registration No. (Attorney/Agent) 45,997 | Telephone 908-298-7221 |
| Name (Print/Type) | Sandy Zarakic | | Date Dec. 14, 2005 |

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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